Commentary

Solving the P2P Problem: An Innovative Marketplace Solution

by Rob Kasunic[†]

It seems that no matter whom you ask or what you read in the press, the outlook for copyright appears bleak. The reasons for these apocalyptic assessments, however, depend on your perspective.

For instance, in a recent article, "The Tyranny of Copyright",[1] anecdotal abuses of the Digital Millennium Copyright Act (DMCA)[2] by certain copyright owners were cited as evidence of the wayward direction of the copyright law. These abuses and other "copyright horror stories" have allegedly been growing over the past few years, culminating in attempts to stifle student speech by Diebold Election Systems, law suits brought by the recording industry against individual file sharers, attempts to force the Girl Scouts to pay royalties for singing around the campfire and the ban by the motion picture industry on sending DVDs to Academy Award screeners. The article's "fair and balanced" depiction of the state of the copyright law "inadvertently" neglected to mention that other sections of the DMCA provided a mechanism for counter-notices that the students might have used to have the Diebold material put back online had Diebold not first withdrawn its threat,[3] that the file

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[1] Robert S. Boynton, *The Tyranny of Copyright*, New York Times Magazine, January 25, 2004: http://www.nytimes.com/2004/01/25/magazine/25COPYRIGHT.html?pagewanted=print&position=/.

[2] Pub. L. No. 105-304 (1998).

[3] *See*, Letter from Robert J. Urosevich, Dec. 3, 2003: http://www.eff.org/Legal/ISP_liability/OPG_v_Diebold/diebold_wdrawal_letter.php. This letter was sent to an upstream provider of Diebold and I have been criticized for stating that the counter-notice provision could have remedied this situation given that OSPs do not have to make counter-notice available. While this is certainly true, the failure to provide counter-notice creates potential liability for OSP's who improperly takedown or disable access to material. In this case, the upstream OSP did not take down the material. The full consideration of the propriety of section 512's burden shifting is, however, beyond the scope of the article.

I note that some of the criticisms of copyright abuse and misuse, e.g., take-down notices, cease and desist letters, and infringement actions (and the claim that fair use is "the right to hire a lawyer"), are more appropriately viewed as critiques of our legal system as opposed to problems limited to copyright, i.e., it is expensive to litigate. Public interest lawyers, either pro bono or efforts by organizations, have the potential to offset such a perceived imbalance. Furthermore, the Copyright Act stands apart from many areas of the law in that it intentionally affords "prevailing" defendants the potential for recovery of attorney's fees and costs. Although claims may at times be silly or misguided, e.g., the threat by Mattel against Klaus Barbie doll (http://www.artcomic.com/shock75.html) or the threat by Ludlow Music against the Jib Jab parody of Woodie Guthrie's This Land is Your Land (http://www.eff.org/deeplinks/archives/001779.php) such claims often lose or evaporate upon a vigorous defense. The Court stated in *Fogarty v. Fantasy, Inc.*, 510 U.S. 517 (1998), that although the Copyright Act did not adopt the British Rule, Congress provided courts with complete discretion in awarding attorney's fees to prevailing plaintiffs and defendants alike. Significantly, the Court stated:

> More importantly, the policies served by the Copyright Act are more complex, more measured,

sharers sued by the RIAA had been accused of offering massive quantities of copyrighted works to others around the world to be freely copied[4] and that soon after the screener ban was lifted,[5] watermarked copies of Oscar nominated movies began finding their way onto the Internet.[6] Okay, the threat against the Girl Scouts revealed poor judgment,[7] but let's face it, mistakes happen. When a mistake like that happens, it seldom happens again. Most of these "horror stories" were resolved in the copyright critics' favor. The exception is the suits against individual file "sharers" uploading and downloading copyrighted works on peer-to-peer networks on the Internet. Do these law suits against file distributors validate the critics' claims of copyright abuse?

Others believe that unauthorized peer-to-peer distribution of a work over the Internet demonstrates the current inadequacy of our copyright laws. Unless growth of illegal peer-to-peer distribution can be stopped, they say our system will collapse. Peer-to-peer networks have the capacity to undermine the value of all works. Without adequate incentives to encourage the creation of works, the well will dry up. Of course, no one can compete with free, they say. Does the prevalence of illegal file sharing mean our laws must be strengthened?

The resolution of the peer-to-peer dilemma remains perplexing and elusive. The controversies surrounding peer-to-peer file distribution present one of the most profound challenges to copyright law to date. By examining the controversy and some of the proposals for resolution, this article concludes that a critical step toward resolving the peer-to-peer problem has already occurred in the form of an innovative marketplace alternative to free – the Apple iPod and the Apple iTunes service.

The Language of P2P

From the perspective of copyright owners generally, the primary object of their attention has been focused on preventing unlawful peer-to-peer (P2P) file sharing. Copyright owners aptly point out that euphemistically referring to taking and trading copyrighted works online without payment as "sharing" is a creative means of recasting reality – file "sharing" with strangers is really file taking from copyright owners. Sure, in some cases people offer their collections to others to take, but these generous individuals never give or surrender anything that is theirs. "Sharing" music is something very different from what we try to teach our children, where one child relinquishes something so that another may take a turn. Rather, these music "sharers" generously provide other people's "works" and, through the miracle of technology, never relinquish a thing. This gift of music costs the giver nothing, costs the taker nothing,

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> than simply maximizing the number of meritorious suits for copyright infringement. . . . To that end, defendants who seek to advance a variety of meritorious copyright defenses should be encouraged to litigate them to the same extent that plaintiffs are encouraged to litigate meritorious claims of infringement. . . . Thus a successful defense of a copyright infringement action may further the policies of the Copyright Act every bit as much as a successful prosecution of an infringement claim by the holder of a copyright.

Fogarty v. Fantasy, Inc., 510 U.S. 517, 527 (1998).

The litigation process can be instrumental in furthering the ultimate goal of copyright law. Criticism of the legal system tends to miss this important point. Remember, fair use did not exist until *the courts* created it!

[4] *See e.g.*, John Borland, RIAA sues 261 file swappers, CNET News.com, Sept. 8, 2003: http://news.com.com/2100-1023_3-5072564.html.

[5] *See e.g.*, *Screener Ban Lifted for Oscar Voters*, WESH.com, Oct. 23, 2003: http:// www.wesh.com/ entertainment/2578117/detail.html.

[6] *See e.g.*, Associated Press, *Two more Oscar screeners found on Net*, Jan. 15, 2004: http://www.cnn.com/2004/ SHOWBIZ/Movies/01/15/oscar.screeners.copies.ap/

[7] For stories on the threat and recant, see, Lisa Bannon, *Birds sing, but campers can't - unless they pay up,* Star Tribune, 1996; Ken Ringle, *ASCAP Changes Its Tune; Never Intended to Collect Fees for Scouts' Campfire Songs, Group Says*, The Washington Post, 1996, reprinted at: http://www.law.umkc.edu/faculty/projects/ ftrials/communications/ASCAP.html. See also, *Girl Scouts Change Their Tunes,* San Francisco Chronicle, Aug. 23, 1996: http://www.sfgate.com/cgi-bin/ article.cgi?file=/chronicle/archive/1996/08/23/MN14140 .DTL.

Further investigation into the background of this threat revealed that there was more to this story than met the eye. Apparently, a letter was initially sent to the American Camping Association, an organization of which the Girl Scouts of the U.S.A is a member. After the fallout from the Girl Scouts' publicity over the royalty request, a royalty deal was worked out for all ACA members requiring each camp to pay $1.00 per camp each year for use of all ASCAP songs. The current licensing arrangement is addressed on the ACA website at: http://www.acacamps.org/campline/ 04m_music.htm. Irving Berlin, a founding member of ASCAP, apparently felt betrayed by the entire episode, because he had previously established the God Bless America Fund, dedicating royalties to the Boy and Girl Scout of America. See, http://www.loc.gov/exhibits/treasures/ trm019.html, and http://www.ascap. com/about/history/.

and pays the creator of the work nothing.

To get people away from the rhetorical use of "sharing" in relation to the unauthorized distribution of copyrighted works over the Internet, some copyright owners have chosen to replace the term with another one – "piracy." Conjuring up images of recording industry representatives forcing teenagers to walk off the plank, this term does little to defuse the rhetorical hyperbole. It seems that what has been called the "delicate balance of copyright" has taken on a whole new character. The balance is now often sought by opposing interests taking increasingly extreme and polarized positions in an effort to influence the public debate in their favor. [8]

Most of the time the rhetoric merely obscures the ability to discuss real problems and reasonable solutions. The debate tends to digress into unproductive distractions. For example, copyright owners' charges of "piracy" in relation to use of peer-to-peer file "sharing" are often countered with the claim that the record companies and the movie studios make too much money or that these industries don't pay artists fairly or that they don't really create products that the public wants, and thus, don't deserve the prices they are charging. While there may be some legitimate concerns about copyright owners failing to meet reasonable consumer expectations, the claims of Robin Hood-like altruism are nothing more than a distraction. A *post hoc* rationalization for taking something for nothing may ease the consciences of file sharers, but it does little to address the heart of the problem – artists and creators deserve to get paid for their works. Justifying theft is no better than calling a twelve-year-old who uses the Internet to get free music a pirate.

Might it not be time to deflate the rhetoric and start focusing on common ground and real solutions? Maybe the problem is simply one of greed.[9] We live in a time of excess. Copyright owners often want too much control. The public often wants too much for free – something for nothing. All too often, neither side seems capable of empathy. Yet finding a common ground or the proper balance between these conflicting interests is the essence of copyright. The controversy over P2P is an excellent case in point for this seeming lack of empathy, both for copyright owners' attempts to control the technology and the public's willingness to abuse it.

In many ways, the DMCA was the culmination of copyright owner's attempt to avoid the current problems associated with peer-to-peer file trading. Copyright owners feared the Internet's potential to allow the distribution of unlimited, perfect digital copies of copyrighted works around the globe instantaneously. They realized that while technology could be used to protect against technological reproduction and distribution, technology alone was insufficient. Technological protections could always be hacked and a constant technological arms race between copyright owners and hackers was not the optimal environment for marketplace stability. Not only would consumers object to constant changes in formats or compatibility problems, but constant changes in protection would be likely increase costs and thereby drive up prices to consumers. Legal protection of technological measures could facilitate a marketplace detente.

But anticipating the course of technology and trying to preemptively control it often proves futile. As the Audio Home Recording Act[10] revealed, attempts to harness emerging technology tends to redirect technology to alternative courses. Technology tends to flow like water around obstacles, aided, of course, with the guidance of creative technologists and lawyers. While the DMCA provided copyright owners with considerable control to facilitate and encourage distribution of digital works on the Internet, it did not anticipate or specifically address the peer-to-peer distribution of digital works, where one unprotected copy of a work could be quickly propagated throughout a decentralized network of unrelated individuals. There was also an underestimation of the public's reaction to the DMCA. The potential for control bred distrust. Attempts to assert control fostered contempt.

The music and recording industry bore the brunt of these miscalculations for a number of reasons. The culture and popularity of music was one reason. With popular music blossoming out of counter-culture ideals and principally being sought by teenagers and college students who often tend to view social and legal restrictions with disdain, music was ripe for the picking with this new technology. It was also one of the few types of works available in unprotected digital form on CDs.[11] The relatively small size of the digital music files

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[8] For a thoughtful discussion about the delicate balance of copyright, *see*, David Nimmer, *The Metamorphosis of Contract into Expand*, 87 Calif. L Rev. 17 (1999).

[9] Jane C. Ginsburg, *Essay – How Copyright Got a Bad Name For Itself*, 26 Columbia Journal of Law & the Arts, No. 1 (2002): http://papers.ssrn.com/sol3/papers.cfm?abstract_id=342182.

[10] The Audio Home Recording Act of 1992 added chapter 10, entitled "Digital audio Recording Devices and Media," to title 17. Pub. L. No. 102-563, 106 Stat. 2304, 2312.

[11] At the time of release, there were practical limitations on reproduction – there was no CD reproduction equipment on the market at the time. Copyright owners have historically relied on such practical limitations – nonexistent or inefficient forms of reproduction and distribution technology – as a limit on the potential scope of infringement. Personal computers and the Internet have effectively eliminated most practical limitations on reproduction and distribution, but technological

coupled with emerging compression technology, with advances in CD copying technology, and with expanding hard drives, made music a perfect candidate for downloading. Distribution of songs also gave users an option of customization that they had long desired and at a price that couldn't be beat.

Now it is true that the music industry approached the online distribution of works with, giving them the benefit of the doubt, frustrating caution. Some interpreted this hesitation as a clear sign that the copyright industries were unwilling to give the public works in the form that they desired, that they were clinging to antiquated brick-and-mortar business models simply to maximize their profits. Without dismissing this view, other factors were necessarily playing a role as well.

Unauthorized file "sharing" services such as the former Napster and its progeny have a couple of significant business advantages over legitimate services. The most noted advantage is that they do not have to pay artists. It has been said many times that the labels and others can't compete with free. Whether or not this is true is a question we will return to, but the question interestingly skips a perhaps more important advantage, namely, that unauthorized services do not require authorization.

When Grokster or Aimster began offering their software for the primary purpose of facilitating distribution of copyrighted works, they did not need to get permission from a single songwriter or copyright owner. On the other hand, creating a legitimate service requires negotiating with the copyright owner of the musical work or fulfilling the requirements of a compulsory license, and negotiating with the copyright owner in the sound recording for every single song to be offered over the service. Since a great majority of the contracts previously in existence never envisioned the digital streaming or the digital downloading of these works, clearances for the works have to be negotiated before being included in the legitimate service. Given the breadth of the music industry and the variety of artists and agents, it will come as no surprise that an undertaking of this magnitude is not accomplished quickly. Even though the number of legitimate services have increased, their music libraries contain many holes due to the reluctance of some artists and copyright owners to participate. In many cases the difficulty lies in simply identifying the copyright owner or owners from whom permission must be sought.

Once the music industry became convinced that they must begin to compete with the free services, price was not the only obstacle. Additionally, the first legitimate services demonstrated other fundamental problems. Not only did these services have very incomplete music libraries that bore little resemblance to the unbounded offerings available on the illegitimate services, they also offered access and distribution models vastly different from what users seemed to desire and from what users had become accustomed to getting from illegitimate services – downloadable music.[12] These early services, such as MusicNet, Pressplay and Rhapsody provided subscription services which allowed access to songs for on-demand streaming, but provided little, if any, availability for downloading music. Slowly, a few of these services began initiating some download options, but severely limited the number of downloads or the medium in which the user could download these works. Listen.com's Rhapsody service,[13] for instance, was one of the first services to offer music from all five of the major labels for streaming on demand or through its many webcast radio channels. Yet even now, it allows burning only directly onto a writable CD rather than to the hard drive of a computer. While Rhapsody represented major progress in relation to the other legitimate services and to the legitimate distribution of music over the Internet generally, it did not approach the flexibility of use that could be obtained through the many illegitimate P2P file trading services.

The Legal Battles over P2P

The marketplace was not, however, the only forum for combating the illegal trading of copyrighted works. After the legal struggle to stop centralized trading through Napster's service concluded, the music industry's legal battle encountered more difficult challenges. Decentralized P2P systems quickly replaced users' demand for readily available downloadable music that was not yet available from legitimate services. These decentralized systems posed a more difficult legal question about the extent to which networks, like the

protection measures may be viewed as an attempt to replicate practical limits.

[12] One notable exception to these subscription models was eMusic which was the first service to offer legal downloads of MP3s, but principally of independent labels and artists. This maverick service was not able to compete against Napster at a time when the major labels were unwilling or unable to authorize downloads of music to legitimate services. eMusic was ultimately sold by its original owners. The service continues to exist under new ownership as a download service and now offers over 275,000 MP3s, including many major artists. It is unfortunate, however, that this service that was well ahead of its time in terms of its view of the optimal way to compete with free, turned out to be too far ahead of its time for its own good.

[13] Listen.com and its Rhapsody service have been purchased by RealNetworks and is now a subsidiary of Real.

FasTrack or Gnutella network, could be controlled even if users could be sued. These networks are "self-organizing" and the intermediaries (like Kazaa and Grokster for FasTrack network or Morpheus, BearShare and LimeWire for the Gnutella network) claimed to be only distributors of software interfaces with the network. Significant questions were raised about the independent nature of the FasTrack network when in February of 2002, Kazaa cut off Morpheus' access to that network, leading Morpheus to subsequently move to the Gnutella network.[14] Yet, uncovering the means and nature of control of the FasTrack network has remained elusive and given the open source nature of the Gnutella network, there is diminishing hope of asserting control over it.[15]

Furthermore, law suits against the software distributors and services providing access to these decentralized networks have led to conflicting results. In the *Aimster*[16] case, the Seventh Circuit affirmed the district court's issuance of a preliminary injunction against that service, in part, because the defendant created a service which knowingly facilitated the unlawful trading of copyrighted works and "failed to produce any evidence that its service has ever been used for a noninfringing use, let alone evidence concerning the frequency of such uses."[17] On the other hand, in the *Grokster*[18] case, the district court held that the Grokster and Morpheus services did not have the requisite knowledge at the time that particular infringements were taking place to support a claim of contributory infringement and did not have the duty to control uses of the software that might have led to a finding of vicarious liability. While the latter case is currently being reviewed by the Ninth Circuit, at present, the ability to deter unlawful file trading by controlling the intermediaries does not appear to hold much promise for copyright owners. Even if Grokster or Morpheus were to be found liable, the P2P shell game is capable of further manifestations.

As a result of the inability to stop the primary intermediaries, the recording industry has been forced to take its legal struggles to the next level. Subpoenas were issued to Internet Service Providers (ISPs) under a provision of the DMCA seeking the identity of particular users of peer-to-peer networks. The identities of these users were sought in order to bring copyright infringement suits against them. In cases where the ISPs responded to the subpoenas by supplying the requested user information, the recording industry filed lawsuits against these individuals. In a number of cases, negotiated monetary settlements with users were reached, including a settlement for the reported sum of $2,000 with a twelve year old girl.[19] Despite the unfortunate screening process employed by the recording industry and the ensuing vilification of recording industry in the press, there was a justifiable purpose for these law suits. These lawsuits made people aware that the perceived veil of anonymity on the Internet could be pierced, particularly when anonymity was being abused to protect unlawful activity. It was much easier for people to boldly ignore the copyright law when they felt immune from prosecution, just as it is quite likely that tax compliance would decrease if all auditing ceased. While obviously the record industry could not sue everyone, a clear message was sent that the copyright laws were not simply a matter of personal choice or solely a question of private conscience. This message was reinforced with the specter of significant monetary liability.

While these subpoenas made many of the people engaged in unlawful file trading activity suddenly feel vulnerable, the success of this new approach was limited. First, there was heightened concern from legislators about potential lawsuits against many of our nation's teenagers and their families. Second, one major ISP vigorously challenged revealing the identities of its subscribers requested in the subpoenas. Verizon led a lengthy legal battle to oppose the legality and applicability of the subpoenas issued under a provision of the DMCA. Despite its initial loss in the district court, Verizon recently prevailed in the D.C. Circuit by convincing the court that the subpoena provision was not applicable to a "mere conduit" such a Verizon.[20]

This result in the D.C. Circuit unquestionably set back the record industry's ability to identify high-volume distributors of copyrighted works over P2P networks. Yet, without missing a beat, the recording industry

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[14] Roger Parloff, *The Real War over Piracy*, Fortune, October 27, 2003 at 148: http://www.fortune.com/fortune/technology/articles/0,15114,517663,00.html.

[15] *See also*, John Borland, *P2P companies say they can't filter*, CNET News.com, Jan. 28, 2004: http://news.com.com/2100-1038_3-5149720.html. Yet companies such as Audible Magic Corp. believe that filtering is feasible. *See*, http://www.audiblemagic.com/.

[16] *In re: Aimster Copyright Litigation*, 334 F.3d 643 (7th Cir. 2003) (*ELR* 25:5:9).

[17] *Id*. at 653.

[18] *MGM Studios, Inc. v. Grokster, Ltd*., 259 F.Supp.2d 1029 (C.D.Cal. 2003) (*ELR* 24:11:4), appeal argued, No. 03-55894 (9th Cir. Feb. 3, 2004).

[19] *See e.g.*, CNN, *12-year old settles music swap lawsuit*, Feb. 18, 2004: http://www.cnn.com/2003/TECH/internet/09/09/music.swap.settlement/.

[20] *Recording Industry Association of America, Inc. v. Verizon Internet Services, Inc*., 351 F.3d 1229 (D.C. Cir. 2004) (*ELR* 25:11:11).

quickly filed a large number of "John Doe" suits against unidentified users in order to use the traditional discovery process in civil litigation to identify defendants.[21] The problem with this new strategy is that it takes more time. Since most courts require court approved discovery schedules to establish deadlines for various stages of discovery, court approval of the discovery process adds a temporary delay to the subpoena process. Additionally, it is uncertain how long ISPs retain information about their subscribers. By the time a subpoena is finally issued to an ISP under these John Doe suits, the window of opportunity for obtaining the identity of particular users may be lost.

Suggested Solutions to the P2P Problem

At present, two of the major fronts on unlawful, decentralized P2P file trading have met significant obstacles: major intermediary "services" have escaped secondary liability and the ability to identify infringing users on these networks has been constrained. Since most reasonable commentators agree that the trading of copyrighted works on peer-to-peer networks is generally unlawful activity, the question remains: what can be done to prevent or deter this activity, if not completely, at least to reasonably acceptable limits? Or if it cannot be prevented or deterred, is there a way to adequately compensate copyright owners for works distributed online?

Some have suggested the implementation of alternative compensation systems. For example, Professor William Fisher[22] and Professor Neil Netanel[23] have each proposed somewhat similar models for a "Tax and Royalty System" or "Noncommercial Use Levy" ("NUL") on various consumer devices and media, like DVD burners, CD burners, video recorders and their respective media, in order to compensate composers and copyright owners in a manner similar to that of collective rights organizations.[24]

William Fisher's approach suggests a tax on ISP access and on the technologies used to perform music, including a tax on hard drives and even computers. The revenues from these assessments would then be distributed to copyright owners in proportion to access to the particular works. In some ways, this may be seen as an extension of the Audio Home Recording Act to devices that were, at the time of the AHRA's enactment, not used for the distribution of music and were excluded from the definition of "digital audio recording devices" and digital "audio recording medium."[25] Unlike the AHRA, it is not limited to digital audio recordings and may be extended to other types of copyrighted works.

In the case of Neil Netanel's NUL which builds upon the Copyright Act's concepts of AHRA-type levies and compulsory licenses, the levy system is seen as a middle ground to the alternatives of "digital abandon" and "digital lock-up." The NUL would allow noncommercial reproduction, adaptation and distribution to works made available to the public (excluding works for which public access had not been authorized) and a Copyright Office arbitration panel could determine and adjust the rate for the levy (which could be different for various types of technologies or media, e.g., Internet use by broadband subscribers or DVD recorders).

While these proposals are thoughtful alternatives to the current system and contain similarities to some of the current compulsory licenses adopted in the copyright law in specific situations, they represent a significant across-the-board shift from the present negotiated rights model. Compulsory licenses have historically dealt with special situations rather than creating an across-the-board change in the normal exploitation of copyrighted works.

And, before we abandon our current system, are we confident that an alternative model will work to fulfill the purpose of copyright – to encourage creative authorship that will benefit the public? There are presently many criticisms of existing compulsory licenses and the rate-adjustment systems already in place. Are we at the point of market failure to the extent that such a radical shift is warranted? Are we sure that the advantages will outweigh the costs or consequences? These approaches are well worth carefully considering further if the market fails to adapt, but at present, movement toward implementation of such proposals appears risky and premature.

Lon Sobel's "Digital Retailer" model[26] is a response

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[21] Katie Dean, *RIAA Strikes Again at Traders*, Wired.com, Jan. 21, 2003: http://www.wired.com/news/digiwood/0,1412,61989,00.html?tw=newsletter_topstories_html.

[22] William Fisher, *Promises to Keep: Technology, Law, and the Future of Entertainment* (forthcoming, Stanford University Press, 2004) (Chapter 6: An Alternative Compensation System, is available online at: http://www.tfisher.org/).

[23] Neil Weinstock Netanel, *Impose a Noncommercial Use Levy to Allow Free P2P File-Swapping and Remixing*, 17 Harvard Journal of Law & Technology (forthcoming December 2003): http://www.utexas.edu/law/faculty/nnetanel/null.pdf.

[24] The author of this article apologizes for the gross oversimplification of all of the thoughtful proposals mentioned in this article and hopes that readers will examine all of the articles and proposals in their entirety. Where available online, I have included hyperlinks to facilitate first-hand review.

[25] 17 U.S.C. § 1001 et. seq., Pub. L. 102-563 (1992).

[26] Lionel S. Sobel, *DRM as an Enabler of Business Models: ISPs as Digital Retailers*, 18 Berkeley

to the levy and tax models, and to the general disfavor of compulsory licenses or levies as a market solution. He views the digital rights management and watermarking technologies that are legally protected under the DMCA as an existing means of resolving problems facing unauthorized distribution of copyrighted works online. By using ISPs (and in particular, the ISPs' "servers") as intermediaries in the distribution of DRM-protected copyrighted works, he believes that users can be efficiently charged for downloaded works at rates established by the copyright owners themselves. In this paradigm, the ISPs could function in an intermediary capacity similar to the phone companies' role in charging consumers for use of various services accessed through the telephone lines.

While the use of existing law to address the uncompensated P2P downloading warrants further examination, the viability of this particular intermediary model is questionable. First, while DRM could be applied to new works or newly distributed versions of existing works, it is unclear how this would model would resolve the redistribution of works that are not watermarked. For the music industry, a major component of its value lies not in new works, but in previously released libraries of musical sound recordings. Mr. Sobel believes that "fingerprinting," or the creation of a unique digital identification for every work sought to be protected, could provide a means of addressing this problem, but given possible variations in the fingerprint of a file (e.g., format conversion or encryption), it may be difficult to accomplish this. Nevertheless, giving this fingerprint theory the benefit of the doubt, the proposal faces a more serious obstacle. It requires ISPs to accede to become intermediaries for it to work, either voluntarily or perhaps (although not suggested in the article) by some change to limitations of liability provision of the DMCA contained in section 512, or alternatively through financial incentives, i.e., surcharges or percentages. In the current political climate, it seems highly unlikely that ISPs would voluntarily agree to this role or that Congress could or would impose such a requirement on ISPs. Financial incentives are possible, but would entail a drastic restructuring of current ISP operations. These substantial technological and political obstacles undermine the viability of the proposal. Yet aspects of the proposal's analysis highlight interesting advantages in the use of existing law to encourage a marketplace solution. Further consideration of key elements at the root of this proposal may be combined with more practical implementations to accomplish similar ends. In particular, the key elements to retain are: the potential to obtain compensation for the distribution of all works sought to be protected, the provision of copyright owner discretion in regards to price and control, and the use of existing legal principles to implement the proposal.[27] Can the market create an entity to adopt these features without requiring an entity, like ISPs, to conform to the plan?

Technology Law Journal 667 (2003): http://www.law.berkeley.edu/journals/btlj/articles/vol18/Sobel.stripped.pdf.

The Marketplace and P2P

Many of the remedial approaches suggested to resolve P2P distribution problems tend to assume that market inefficiencies that currently exist will continue to exist without structural changes to the system. But since the certainty of technological change is one of the few constants in the field of copyright law, an assumption that ignores incremental marketplace adaptation to the present legal, technological, and economic realities ignores history. In the past, market failure or market inefficiency has been resolved within the current legal system in a number of ways. The judicial expansion of the scope of fair use has been one means of acknowledging market failure.[28] Similarly, limited statutory changes to the Copyright Act have been enacted to adjust the balance of copyright in response to changes in technology. Yet, judicial and legislative intervention is a course of last resort. A precondition to seeking such intervention would seem to be clear evidence that marketplace resolution of the problem is unlikely under the current legal framework.

Does the DMCA and traditional copyright law provide legitimate entities with adequate tools to adapt, with time, to the reasonable expectation of users and the reasonable needs of copyright owners? The current market seems to suggest that it does. There is every reason to believe that some form of the "celestial jukebox"[29] will ultimately become available in the market. To a great extent, it already exists in the form of on-demand access to musical sound recordings through many legitimate subscription services. Many services provide access to all of the currently authorized works on

[27] Mr. Sobel notes other potential problems with the proposal in the article, e.g., spamming to increase royalties, intra-industry conflicts, privacy, pay-per-use concerns, and excessive rates. Since these are beyond the scope of this article and discussed within the proposal itself, these problems will not be discussed.

[28] Wendy Gordon, *Fair Use as Market Failure: A Structural and Economic Analysis of the Betamax Case and Its Predecessors*, 82 Columbia Law Review 1600 (1982). Reprinted at 30 Journal of the Copyright Society 253 (1983).

[29] *See, e.g.*, Paul Goldstein, *Copyright's Highway: The Law and Lore of Copyright from Gutenburg to the Celestial Jukebox* (1994).

a subscription basis (and these on-demand models are increasingly prevalent for other types of works as well, e.g., motion pictures). The DMCA and its protection of technological controls has fostered the development and deployment of "on-demand" services. The problem is that on-demand access services do not appear to satisfy the reasonable expectations of all users. When strong consumer demand is unmet in the legitimate marketplace, it is not uncommon for illegitimate entrepreneurs to fill the void and supply this demand.

The reality is that users of copyrighted works are different. One size does not fill all in our society. The key to market success is not a monolithic celestial jukebox, but rather sufficient market diversity to satisfy the demand for many different types and uses of copyrighted works. The DMCA was not enacted in order to support the construction of a universal on-demand system, but rather to facilitate a diversity of "use-facilitating" business models. On-demand subscription access is only part of that equation.

Even though more market options exist for users than ever before, technology tends to expand user expectations for access and use of copyrighted works. Copyright owners have an incentive to meet these expectations, but the fear of uncontrolled copying tempers the desire to distribute a work and causes understandable hesitation on the part of copyright owners. Free access to a work on the Internet, through P2P systems or otherwise, can destroy the value of a work. As a result of this fact, copyright owners often seek greater control over access and distribution.

A copyright owner's interest in control may be more the result of uncontrolled marketplace copying than it is the mere availability of the legal authority to control. Copyright owners typically want to make their works available to the widest audience possible in order to maximize profits and to gain recognition. Intra-industry competition (e.g., publishers, studios, or labels promotes a diversity of options to users and undermines the marketability of restrictive models. There is little competitive advantage in locking up works in a manner that frustrates consumers, limits distribution, or minimizes access.

Thus, present reality would suggest that peer-to-peer trading and digital copying has the capacity to adversely affect "legitimate" and "reasonable" public access and distribution. Copyright owner fear of P2P can result in greater attempts to control or even "lock-up" works. Legitimate users' fears of excessive control by copyright owners may become a reality when widespread abuse of the legitimate system occurs. Fear on both sides of the issue tends to undermine the reasonable expectations of users and the reasonable needs of copyright owners.
Perceived self-interest too often dominates the market and results in copyright owners seeking to tighten control and users seeking to be free of any restraints. Technology becomes everyone's answer because it is both able to lock up (e.g., DRM) and to break through control (e.g., P2P). Can technology be used to both facilitate new uses and to protect copyright owners? Can a middle ground be achieved?

Technology can assist in safeguarding copyright owners interests and also offer the public a wider diversity of uses. As user expectations change with advances in technology, so will the nature of successful distribution models. Distribution models that minimize user limitations will invariably have competitive advantages over those that are unnecessarily restrictive. Since users are different, an efficient market will seek to both satisfy a diverse range of user options and the needs of copyright owners.

A Marketplace Solution

So how can an efficient marketplace operate in relation to the distribution of music? How can peer-to-peer distribution's effect on the value of works be minimized? By providing a greater variety of options and choices to consumers, by seeking to balance reasonable consumer expectations with reasonable copyright owner concerns for protection, and by offering value, quality and consistency that is not available through illegitimate services. The reasonable expectation of copyright owners has never been to completely eliminate all potentially infringing uses, but to minimize the harm that infringement might have on the market for a work. Our current legal and technological framework provide copyright owners with the means to minimize uncontrolled copying while at the same time expanding the user opportunities for legitimate uses of copyrighted works. The battle against illegitimate P2P distribution can not be won solely by legal or technological means. The success of legal and technological capabilities must be achieved in the marketplace. There must be effective competition with the illegitimate services.

The legitimate market for digital musical sound recordings is finally beginning to achieve an adequate degree of diversity and user choice. A growing number of sources now offer on-demand access. Some users' will seek this option. Satellite radio and digital music channels, such as XM Radio, Comcast Music Service and webcasting stations provide to another group of users in their homes, offices or car, depending on the particular service chosen. Some services have begun to offer burning music tracks directly onto recordable CDs. This will satisfy another group of users who desire owning hard copies of their selections to access in a variety of locations. Many legitimate options are now becoming available, but until recently, none have attempted to replicate the reasonable user habits of the user of the illegitimate services. None of the existing business models have effectively competed directly with free.

Apple has changed all of that. The Apple iTunes

music service and the Apple iPod represent a significant benchmark in the battle against illegitimate peer-to-peer file trading. The iTunes service is a major departure from all of the previous distribution models for authorized digital music. Although it offers individual songs and complete collections (the equivalent of what is available on a CD) for download at prices equivalent to other services, it provides much more flexible user terms than has ever been offered on the legitimate market. In many ways, it represents the first market attempt to replicate the uses available to users through unauthorized services with two caveats: it charges for works and it incorporates obstacles for unreasonable re-distribution. To understand exactly why the service is unique, some details about its operation and terms of service are necessary.

First came the iPod. The iPod is a sleek, white and stainless steel, pocket-sized player with easy navigation controls, and a massive hard drive. The device's innovative simplicity understates its versatility and capacity. The packaging that the iPod comes in is, in itself, a work of art and contributes to the aura of the device.[30] While the first versions, which were introduced to the market in late 2001, ranged in size from 5 to 20 gigabytes, it is currently offered with a range of hard drive sizes up to 40 gigabytes. Apple's 40 GB player is marketed with a capacity of carrying (allegedly) up to twenty thousand individual songs. At a time when the users of unauthorized services had grown accustomed to acquiring a large quantity of music on their hard drives and the ability to customize play lists of a vast quantity of songs, the capacity of the iPod replicated what many users could store on their computers. It competed with this experience by allowing a user to place all those songs in a pocket, in a car, on a walk or in any room of the home or office. Although Apple was not alone in offering portable hard drive players, it created the better player. Many found the idea of carrying around an enormous music collection in their pocket an exciting prospect, but the iPod's appeal is also tied to its hype in the press, advertising campaigns and word of mouth. The popularity of the device was not only in its functionality, but its perception as a cool gadget.

At first, the iPod was only available for Apple operating systems, but eventually was offered in a Microsoft Windows compatible version. Similarly, iTunes, Apple's online music service, was only available for the Mac, and Windows iPod users could not purchase music through the iTunes music store. Toward the end of 2003, the iTunes music service was made available to Windows users.

Like many other music services, iTunes offered users the ability to purchase individual songs just as unauthorized services did, thus satisfying the long-time user desire to purchase parts of collections rather than bundled selections as copyright owners had been loathe to abandon. No longer did users have to buy unwanted songs in order to purchase the one or two songs that they really wanted on a CD. User preferences eventually affected distribution models. The price for these purchases on the iTunes service is ninety-nine cents per song or, a discounted price per song if an entire CD is purchased.

On registering to use the iTunes software, a user is informed of and asked to agree to the terms of service. To date, the iTunes music service provides the most flexible terms of any of the current online music distribution services. But it also provides protection from unreasonable redistribution. Downloaded music files are delivered in the Dolby Laboratories' Advanced Audio Coding (AAC) file format (an MPEG-4 specification and a proprietary format administered by Dolby via its independent subsidiary Via Licensing Corporation). This AAC file format supports digital rights management and all songs downloaded from the iTunes service are delivered as Protected AAC files (.m4p file extension as opposed to unprotected AAC files that bear the .m4a extension). Apple's DRM music protection scheme has been dubbed "FairPlay" by Apple.

Up to five "authorized" computers at a time may access Protected AAC files. The user has the ability to authorize and de-authorize computers, but the music can only be played on a maximum of five computers. This satisfies the needs of users with multiple computers and allows a user to access the songs on, for example, a desktop, a laptop, and another family member's computer. This reasonable accommodation for multiple computer users accepts the reality that most people do not want one digital copy of a work tethered to one machine. It also provides easy modification of which five machines are authorized to access the works, reducing problems faced by computer upgrades. In addition, if one of those computers is on a network, up to five users at a time can stream the songs from the purchased music library or play lists created from that library. These other network users cannot copy the music to their computer, cannot create play lists and cannot access the music when the host is turned off. Thus, iTunes allows members of a household, for instance, to listen to music that has been purchased and to "share" the access to the music purchased.

The iTunes software also allows music downloaded to a hard drive of a computer to then be both burned onto CDs (in the form of play lists) or to be loaded onto an iPod. Every time a CD is burned, a popup message warns that burning may only be performed for personal use.[31]

[30] For more on the iPod, *see*, Rob Walker, *The Guts of a New Machine*, New York Times Magazine, Nov. 30, 2003.

[31] There is some question on whether the purchase of a downloaded song is a "sale" or a "license" of the copy. *See e.g.*, Evan Hansen*, eBay mutes iTunes song auction*,

Although limitations on the number of times a play list can be burned are somewhat weak and do not technologically control use, the warnings and technological measures create speed-bumps on the road to unreasonable use. And unreasonable use is redirected with a number of flexible alternatives, such as the ability to load as many iPods as the user can afford to buy.

The iPod impedes the copying of files from the iPod to other computers by "hiding" files and the DRM in the Protected AAC files limits access of any files copied to authorized computers associated with those files. The protection is not impenetrable, but it provides obstacles to foster compliance with the reasonable terms of service that were accepted by the user. One of the primary obstacles to redistribution of files is that the name and Apple ID of the person who purchased the music are embedded in each purchased song. This fingerprinting discourages redistribution of songs, since if a song finds its way onto a peer-to-peer system, the songs can be traced back to the person who purchased the song.

While other services are beginning to offer more flexible terms, Apple has negotiated a new flexible standard unmatched by other legitimate services. Added to these features are additional uses in conjunction with Audible.com, a leading service in the downloadable ebook market and other features. The iPod/iTunes system has created a compelling new tool in the battle against unauthorized P2P distribution – a competitive service tied to a well-designed and versatile gadget. As of January, 2004, Apple reported sales of over 2 million iPods, making it the leading digital music player in the world. Apple has also just begun distributing its new "iPod mini" that will hold a 1,000 songs and which is smaller, lighter and cheaper that the regular iPods. Before sales began, Apple had already received over 100,000 orders for these new devices.[32] The iTunes store, which launched in April 2003 (but which was not available for Windows users until mid-October 2003)[33] has had a similarly strong showing, selling over a million songs in the first five-and-a-half-days of its existence and selling over 30 million songs as of January 5, 2004.

Despite this enormous success, naysayers abound. Inspection of the sales figures for the iPod and iTunes indicate that at present, with 2 million iPods in user's pockets and 30 million songs purchased through iTunes, only 15 legitimately purchased songs have been purchased per iPod. Similarly, some critics of Apple's hype have noted that to fill a 40 GB iPod, a person would have to spend up to $20,000 dollars to do so. These critics point out that since it is unlikely that a person will fill an iPod with legitimate downloads, but rather rely primarily on previously downloaded illegitimate copies or ripped music from CDs, this model is not truly compensating creators.[34] In addition, they state that since Apple's Steve Jobs was quoted as saying "there's no money in online music" and that Apple's success comes from selling iPods, not licensed music, the market for per-unit pricing of legitimate online music sales is inefficient and doomed to failure.

While these criticisms may ultimately prove true, they also must be put into perspective. They are criticisms primarily intended to undermine the proprietary DRM model in favor of some alternative,

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CNET News.com, Sept. 5, 2003: http://news.com.com/2100-1027_3-5071566.html?tag=fd_top, and Alorie Gilbert, *iTunes auction treads murky legal ground*, CNET News.com, Sept. 3, 2003: http://news.com.com/2100-1025_3-5071108.html.

Apple's "Terms of Sale" expressly state that "burning and exporting capabilities are solely an accommodation" to the user (for personal, noncommercial use) and do not constitute a grant or waiver of any rights of the copyright owners in works downloaded. Apple iTunes terms of service and sale may be viewed at: http://www.apple.com/support/itunes/authorization.html. Although Apple uses the term "sale," this would appear to apply only to the copy of the work downloaded to the hard drive of the user's computer. The further "reproduction" of the work onto another medium does not appear afford "ownership" status to the user, but rather a license for personal, noncommercial use (as indicated in the pop-up screen which appears and which must be agreed to before burning is allowed). Since the reproduction of the work appears to be a licensed copy of the work, the first sale doctrine would not apply to burned disks or to iPods loaded with music. The author expresses thanks to David Grossman for raising the question of "sale" in class.

[32] Reuters, *IPod Mini Shrinks, Goes Pink*, Wired News, Feb. 17, 2004: http://www.wired.com/news/mac/0,2125,62320,00.html.

[33] Ina Fried, *Apple to Launch iTunes for Windows*, CNET News.com, Oct. 9, 2003: http://news.com.com/2100-1027-5088849.html.

[34] See, e.g., Andrew Orlowski, Why wireless will end 'piracy' and doom DRM and TCPA – Jim Griffin, The Register, Feb. 11, 2004: http://www.theregister.co.uk/2004/02/11/why_wireless_will_end_piracy/.

This criticism tends to assume impatience in the area of amassing a music collection and also ignores that one of the selling points of 20 and 40GB iPods is that they may also be used as portable hard drives for other types of non-music digital files. Similarly, expenditures of $20,000 dollars for collections of copyrighted works do not appear to be such an outrageous proposition when the amounts being spent by some consumers on DVDs are considered. *See*, Wilson Rothman, *DVD's? I Don't Rent. I Own.*, New York Times, Feb. 26, 2004: http://www.nytimes.com/2004/02/26/technology/circuits/26vide.html.

whether the current illegitimate model or an alternative pay-per-access, celestial jukebox model. The real question to ask is whether Apple's model should be given a chance to prove the critics wrong. As noted earlier, market failure may necessitate a move to alternate models, but reports of the market's demise have been greatly exaggerated. Home-based broadband and Napster appeared on the market in 1999, giving it almost a five-year head start on a competitive legitimate service compatible with Windows-based machines. Many users who want to use iTunes, have found that they have to upgrade their systems somewhat to do so, e.g., Windows XP, broadband, firewire or USB. It is reasonable to expect strong growth, since sales on iTunes have doubled in the first 4 months of availability to Windows' users. It is also likely that a larger percentage of the new iPod purchasers will be attracted by the availability of iTunes, whereas early iPod purchasers were more interested in the device itself. Apple's move toward cheaper iPods in coordination with the marketing of iTunes through prepaid cards to be sold at Target and other stores, cross advertising with Pepsi, and other strategies create enormous potential. No one said competing with free was easy, but Apple is at least giving it a shot and making money in the process. Apple's model represents a strong beginning for a legitimate market that, prior to Apple's innovative approach, did not exist in any real sense.

Apple may not be making money from iTunes, but does this prove market inefficiency or failure? Or, does this strategy reveal market ingenuity? Companies seldom do things that hurt their bottom line. Apple may not be profiting directly from iTunes, but it is profiting from leveraging iTunes. Giving one product away in order to promote another has been a practice in the marketplace for some time, e.g., Adobe's distribution of the Acrobat Reader in order to increase demand for the full version of Adobe Acrobat is but one example. Apple's application of this strategy in the early stages of the legitimate digital music market is a creative approach to a market with thin profit margins. Apple entered the market, despite the very thin margins, and devised a way to make it work for itself, for users, and for copyright owners.

While iPods may be partially filled with unauthorized downloads[35] or ripped CDs, it is fortunate that Apple and the recording industry kept their eyes on the ball – the goal of creating a reasonable means of changing illegitimate users into legitimate users. Apple's model represents a welcome acceptance of reality – that unauthorized downloaded music has already occurred (what's done is done), that ripping software exists, and that CD's can be ripped. Should the fact that people have illegally downloaded music stop them from now entering the legitimate system unless they abandon their illicit bounty? Can a competitive legitimate system deny users the ability to rip lawfully purchased CDs? Should either of these types of users be summarily excluded from the legitimate system? The Apple model accepts these users back into the fold and offers reasonable and appealing alternatives for the future. At the same time, it offers the legitimate system a potentially large increase in the number of new users who have not yet entered the digital music market by providing them with a popular gadget and a reasonably flexible service that will suit most of their needs.

As the iTunes model demonstrates, it does not make sense to alienate the very users that you seek to attract. Copyright owners are beginning to realize that allowing various private uses may be a means of preventing more harmful copying over the Internet. This *quid pro quo* may be seen in other areas as well, such as the broadcast flag or some ebook models, and appears to represent copyright owner willingness to give up some control in relation to private copies in order to prevent or discourage distribution over the Internet – activity which has a much more significant effect on the value of copyrighted works.

A critical test will be whether iTunes and other services will be able to obtain authorization for a more comprehensive library of works. Apple's claim to over 500,000 titles will need to be expanded to levels closer to the illegitimate market that boasts millions of titles. Even if premium prices must be paid to attract some artists into the legitimate digital market, there must be a legitimate offering available in order for the system to adequately lure users from reliance on the illegitimate market. It would be wise for copyright owners to facilitate negotiated agreements with innovative legitimate services, even at terms they are hesitant to embrace, if they wish to avoid solidifying the appeal of illegitimate uses and if they wish to avoid contributing to a standoff that may eventually lead to compulsory rates or levies.

Only time will tell whether Apple's strategy will work. The recording industry's effort to make illegitimate services less attractive, including suits against illegal services and infringing users of these services, spoofing,[36] and education, may continue to be

[35] iTunes allows users to "consolidate" the music libraries on their hard drive into the iTunes music folder. This "consolidation" feature can therefore pull into iTunes previously downloaded or ripped MP3 files. While this may be viewed as legitimizing improper activity, it might also be viewed as an amnesty to encourage future legitimate conduct.

[36] Spoofing is the activity of creating imitation files to be circulated on P2P services. These files can be empty or can contain anti-infringement advertisements, either of which in high enough numbers, reduce the efficiencies of infringing on P2P systems by requiring infringers to wade through vast amounts of unwanted material in order to find the desired copyrighted work. Spoofing is

necessary adjuncts to marketplace competition. These efforts demonstrate that there are "costs" for infringement and assist in the widespread transition to legitimate services. The filtering of unauthorized copyrighted material traded over P2P networks may also prove to be a workable means of decreasing the volume of unauthorized distribution.[37] Properly tailored congressional adjustment or clarification of the relevant factors to be considered for a determination of secondary liability may also play a role in the solution.[38] Competition and a diversity of options in the marketplace will also play a significant factor in luring users away from illegal acts and into the legitimate market. iTunes' competitors may also find an even better paradigm, but Apple's approach reveals a significant step that sets a new standard for the legitimate market. It is an innovative effort that deserves to be applauded for its flexible approach and deserves to be given a chance to work. Before considering fundamental changes to the negotiated system that has served this country quite well for many years, it would be wise to discover whether our current copyright system can adapt to effectively compete with free.

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an interesting alternative or adjunct to technological protection that is perfectly suited to foiling efficient infringement over P2P networks. Essentially, it attempts to make finding a copyrighted work as easy as finding a needle in a haystack. Recent advancements have been made in the creation of spoofed works on a massive scale. See, e.g., Katie Dean, Academics Patent P2P Spoofing, Wired News, May 8, 2004: http://www.wired.com/news/digiwood/0,1412,63384,00.html

[37] *See supra*, footnote 7.

[38] S. 2560, the INDUCE Act, is an attempt to adjust this determination by making it clear that if a business depends on infringement for its commercial viability, that fact will be a consideration for liability. Such a consideration would almost certainly result in liability for the P2P software or services that primarily exist to facilitate infringement.